

## **AMENDMENTS TO THE CLAIMS**

1. **(CURRENTLY AMENDED)** A method for modifying combustion in a combustion chamber of a 4-stroke internal combustion engine running under standard warm (non-starting) engine temperatures, the method comprising the step of briefly opening a combustion chamber **intake** valve sometime during a period spanning:
  - a. the latter half of the compression stroke, and
  - b. the first half of the power stroke,**such opening being subsequent to the closing of the same intake valve during the intake stroke, and solely allowing the escape of combustion chamber gases.**
2. **(CURRENTLY AMENDED)** The method of claim 1 wherein the briefly opening of the combustion chamber **intake** valve effects an escape of no greater than approximately 15% of the mass of the combustion chamber contents.
3. **(CANCELED)**
4. **(CURRENTLY AMENDED)** The method of claim 1 wherein the combustion chamber **intake** valve is briefly opened two or more times during the period.
5. **(CURRENTLY AMENDED)** The method of claim 1 wherein the combustion chamber **intake** valve is briefly opened during the period of crankshaft rotation between:
  - a. 50 degrees before top dead center, and
  - b. 50 degrees after top dead center.

6. **(CURRENTLY AMENDED)** The method of claim 1 wherein the combustion chamber intake valve is briefly opened during the period of crankshaft rotation between:
  - a. 30 degrees before top dead center, and
  - b. 30 degrees after top dead center.
7. **(CURRENTLY AMENDED)** The method of claim 1 wherein the combustion chamber intake valve is briefly opened for no greater than approximately 7 degrees of crankshaft rotation.
8. **(CURRENTLY AMENDED)** The method of claim 1 wherein the combustion chamber intake valve is briefly opened for no greater than approximately 5 degrees of crankshaft rotation.
9. **(CURRENTLY AMENDED)** The method of claim 1 wherein the combustion chamber intake valve is briefly opened for no greater than approximately 3 degrees of crankshaft rotation.
10. **(CURRENTLY AMENDED)** The method of claim 1 wherein the combustion chamber intake valve which is briefly opened is an intake valve.
11. **(CURRENTLY AMENDED)** The method of claim 1 wherein the combustion chamber intake valve is briefly opened at or substantially near the time of ignition.
12. **(CURRENTLY AMENDED)** The method of claim 1 wherein multiple combustion chamber intake valves are briefly opened during the period.

13. **(CURRENTLY AMENDED)** The method of claim 12 wherein at least some of the multiple combustion chamber intake valves are briefly opened during the period starting at different times.
14. **(CURRENTLY AMENDED)** The method of claim 12 wherein the multiple combustion chamber intake valves include an intake valve and an exhaust valve.
15. **(CURRENTLY AMENDED)** A method for modifying combustion in a combustion chamber of a 4-stroke internal combustion engine running under standard warm (non-starting) engine temperatures, the method comprising the step of briefly opening a combustion chamber intake valve during a period extending over at least one of the compression stroke and the power stroke, with such brief opening:
  - a. being subsequent to the closing of the same intake valve during the intake stroke, and
  - b. effecting an escape of no more than approximately 15% of the mass of the combustion chamber contents.
16. **(CURRENTLY AMENDED)** The method of claim 15 wherein the combustion chamber intake valve is briefly opened two or more times during the period.
17. **(CURRENTLY AMENDED)** The method of claim 15 wherein the combustion chamber intake valve is briefly opened during the period of crankshaft rotation between:
  - a. 50 degrees before top dead center, and
  - b. 50 degrees after top dead center.

18. **(CURRENTLY AMENDED)** The method of claim 15 wherein the combustion chamber intake valve is briefly opened during the period of crankshaft rotation between:
  - a. 30 degrees before top dead center, and
  - b. 30 degrees after top dead center.
19. **(CURRENTLY AMENDED)** The method of claim 15 wherein the combustion chamber intake valve is briefly opened for no greater than approximately 7 degrees of crankshaft rotation.
20. **(CURRENTLY AMENDED)** The method of claim 15 wherein the combustion chamber intake valve which is briefly opened is an intake valve.
21. **(CURRENTLY AMENDED)** The method of claim 15 wherein the combustion chamber intake valve is briefly opened at or substantially near the time of ignition.
22. **(CURRENTLY AMENDED)** The method of claim 15 wherein multiple combustion chamber intake valves are briefly opened during the period.
23. **(CURRENTLY AMENDED)** The method of claim 22 wherein at least some of the multiple combustion chamber intake valves are briefly opened during the period starting at different times.
24. **(CURRENTLY AMENDED)** The method of claim 22 wherein the multiple combustion chamber intake valves include an intake valve and an exhaust valve.